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1744\$

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PTO/SB/21 (08-00)

Approved for use through 10/31/2002. OMB 0851-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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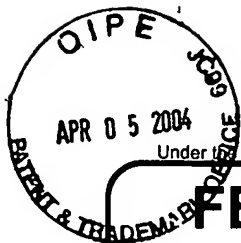
TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application Number	10/050,501	
	Filing Date	1/16/2002	
	First Named Inventor	Lewis Illingworth	
	Group Art Unit	1744	
	Examiner Name	Snider, Theresa T	
Total Number of Pages in This Submission	78	Attorney Docket Number	120-102

ENCLOSURES <i>(check all that apply)</i>		
<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input checked="" type="checkbox"/> Affidavits/declaration(s) <input checked="" type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers <i>(for an Application)</i> <input checked="" type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input checked="" type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group <i>(Appeal Notice, Brief, Reply Brief)</i> <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) <i>(please identify below):</i>
Remarks (1) Response to Office Communication; (2) New Oath/Declaration; (3) Corrected Drawings; (4) Extension of Time Request; (5) Extension of Time Fee of \$55.00; and (6) Return Receipt Postcard		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Jason A. Skinder, Esq. - Ward & Olivo
Signature	
Date	4/1/04

CERTIFICATE OF MAILING		
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: 4/1/04		
Typed or printed name	MICHAEL J ZINNA	
Signature		Date 4/1/04

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PTO/SB/17 (10-03)
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FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT

(\$)

55

Complete if Known

Application Number 10/050,501

Filing Date 1/16/2002

First Named Inventor Illingworth

Examiner Name Snider, T

Art Unit 1744

Attorney Docket No. 120-102

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account:

Deposit Account Number
Deposit Account Name

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments

☐ Charge any additional fee(s) or any underpayment of fee(s)

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FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 770	2001 385	Utility filing fee	
1002 340	2002 170	Design filing fee	
1003 530	2003 265	Plant filing fee	
1004 770	2004 385	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	

SUBTOTAL (1) (\$)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
Independent Claims	-20** =	X	
Multiple Dependent	-3** =	X	

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 86	2201 43	Independent claims in excess of 3
1203 290	2203 145	Multiple dependent claim, if not paid
1204 86	2204 43	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1051 130	2051 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non-English specification	
1812 2,520	1812 2,520	For filing a request for ex parte reexamination	
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	55
1252 420	2252 210	Extension for reply within second month	
1253 950	2253 475	Extension for reply within third month	
1254 1,480	2254 740	Extension for reply within fourth month	
1255 2,010	2255 1,005	Extension for reply within fifth month	
1401 330	2401 165	Notice of Appeal	
1402 330	2402 165	Filing a brief in support of an appeal	
1403 290	2403 145	Request for oral hearing	
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,330	2453 665	Petition to revive - unintentional	
1501 1,330	2501 665	Utility issue fee (or reissue)	
1502 480	2502 240	Design issue fee	
1503 640	2503 320	Plant issue fee	
1460 130	1460 130	Petitions to the Commissioner	
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)	
1806 180	1806 180	Submission of Information Disclosure Stmt	
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	
1809 770	2809 385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810 770	2810 385	For each additional invention to be examined (37 CFR 1.129(b))	
1801 770	2801 385	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

55.00

SUBMITTED BY

(Complete if applicable)

Name (Print/Type)	Jayen Skinder	Registration No. (Attorney/Agent)	47094	Telephone	408-277-3333
Signature		Date	4/1/04		

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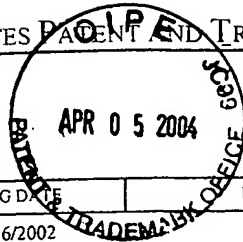
This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,501	01/16/2002	Lewis Illingworth	120-102	9601

7590
12/04/2003
Ward & Olivo
Suite 300
382 Springfield Avenue
Summit, NJ 07901

EXAMINER

SNIDER, THERESA T

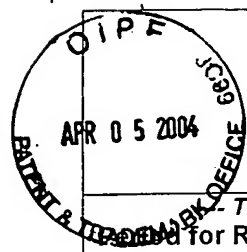
ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

ANNOTATED COPY
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CONVENIENCE



Office Action Summary

Application No.

10/050,501

Applicant(s)

ILLINGWORTH, LEWIS

Examiner

Theresa T. Snider

Art Unit

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The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 54 and 55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-53, drawn to a toroidal vortex vacuum cleaner, classified in class 15, subclass 346.
 - II. Claims 54-55, drawn to a method of particle separation, classified in class 95, subclass 267.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Michael Zinna on 11/21/2003 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-53. Affirmation of this election must be made by applicant in replying to this Office action. Claims 54-55 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Oath/Declaration

5. This application presents a claim for subject matter not originally claimed or embraced in the statement of the invention. The application presently has a declaration from 09/728,602. A supplemental oath or declaration is required under 37 CFR 1.67. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02. The new declaration should also include the domestic priority claims.

Drawings

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 104(in Figure 1C, page 3, line 14). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. *reference sign added - response p. 2*

7. The drawings are objected to because Figure 23 has 2-2315s, directed to different elements. Should Figure 10 be labeled 'prior art'? In figure 21, 'a' and 'b' should be replaced with 'A' and 'B', to correspond with page 35, lines 9 and 17. The flow appears to be the reverse of the invention. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. *Reference signs 2318 and 2320 have been added and the spec amended - response p. 3*
Figure 21 has been changed to replace "A" and "B" in caps.

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 105(figure 1C)
reference sign 105 has been added - response p. 2

, 1602 (figure 16) and 2203, 2204, 2206 (figures 22A-B). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are

required in reply to the Office action to avoid abandonment of the application. The objection to

the drawings will not be held in abeyance. *Reference arrows have been moved regarding sign 1602 - response p. 32. sign 2204 has been added - response p. 7. sign 2206 has been added - response p. 4. sign 2203 has been added - response p. 5*

9. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:

reference character "402" has been used to designate both 'coanda nozzle' (page 4, line 12) and 'output nozzle' (page 4, line 16); *sign 410 has been added to Figure 4 - response p. 7 to designate the output nozzle*

reference character "501" has been used to designate both 'straight fashion' (page 5, line 17) and 'stray air' (page 6, line 2); *amended spec - response p. 8*

reference character "604" has been used to designate both 'coanda nozzle' (page 6, line 22) and 'annular curved surface' (page 7, line 2); *amended spec - response p. 9*

reference character "2205" has been used to designate both 'collector' (page 39, line 11) and 'chamber' (page 39, line 20); *amended spec - response p. 6 to designate chamber as 2207 + amended drawing*

reference character "2317" has been used to designate both 'canister housing' (page 41, line 11) and 'vacuum cleaner housing' (page 41, line 15); *amended spec - response p. 3*

reference character "2315" has been used to designate both 'motor' (page 41, line 10) and 'hosing' (page 41, line 14); *amended spec - response p. 3 to designate hosing as 2319 + amended drawing*

reference character "2501" has been used to designate both 'side by side' (page 43, line 10) and 'end view' (page 43, line 15); *added new reference sign, and changed Figure 25B response p. 9 2506 for end view*

reference character "2502" has been used to designate both 'siamese twin' (page 43, line 10) and 'side view' (page 43, line 14); *- response p. 9 added reference number 2508 to designate 'side view' and amended drawings*

reference character "2503" has been used to designate both 'concentric'(page 43, line 11) and 'top view'(page 43, line 14). *response p. 9 added reference number 2507 for 'top view' + amended drawing*

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

10. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:

reference characters "600"(page 6, line 18) and "604"(page 6, line 22) have both been used to designate 'coanda nozzle'; *amended spec - response p. 9 to designate 600 as 'annular nozzle' and 604 as 'annular curved surface'*
reference characters "1002"(page 27, line 16) and "1003"(page 27, line 17) have both been used to designate 'inner tube'. *amended spec - response p. 10*

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

11. The disclosure is objected to because of the following informalities:

Exemplary of such:

Page 1, lines 3-13 and page 15, lines 5-17, the serial numbers/patent numbers should be inserted and the status of the applications updated. *response p. 10-11*

Page 3, line 16, 'to'(second occurrence) should be deleted. *response p. 2*

Page 4, line 16, 'an' should be deleted. *response p. 7*

Page 7, line 1, 'a' should be deleted; *response - p. 9*

Line 3, 'a' should be replaced with 'the'. *response p. 9*

Page 25, line 15, '900' should be inserted after 'attractor'. *response p. 11*

Page 27, line 3, 'withing' should be replaced with 'within'. *response p. 12*

Page 34, line 6 and page 35, lines 10-11, specification discloses an outer tube and an inner 'donut'. Is the inner donut different than the previously used inner 'tube'? *response p. 13*

Page 35, lines 10-11, to correspond with figure 21a, it is believed that '2103' in line 10 should be replaced with '2104' and '2104' in line 11, should be replaced with '2103'. *response pg 13*

Page 41, line 17, it is unclear as to what is meant by 'the leads a'. *response p. 3*

Page 43, line 17, 'attachment' should be replaced with 'attachments'. *response p. 9*

Abstract, line 1, 'improved' should be deleted. *response p. 16*

Appropriate correction is required.

Claim Rejections - 35 USC § 112

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 1-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Exemplary of such:

Claim 1, line 4, it is unclear as to what is meant by 'canister-style vacuum cleaner housing'; Applicant should define the structural orientation of the housing;

amended spec - response p. 14

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Lines 4-6, it is unclear as to the structural relationship of the elements to each other. *response p. 33*

Claims 2-21, 'A' should be replaced with 'The'. *Claims amended as such*

Claim 7, line 3, 'hinged' to what? *response p. 18*

Claims 8-9 and 11-15, line 2, it is unclear as to where the 'hose' is located with respect to the other previously recited elements. *response p. 18-19*

Claim 11, line 2, it is unclear as to what is meant by 'side by configuration'. *response p. 33*

Claim 12, line 2, it is unclear as to what is meant by 'siamese twin configuration'. *response p. 33*

Claim 13, line 2, it is unclear as to what is meant by 'hose of a concentric configuration'; why concentric? *response p. 33*

Claim 16, line 2, it is unclear as to where the 'handle' is located with respect to the other previously recited elements. *response p. 20*

Claim 21, line 2, it is unclear as to where the 'trap' is located with respect to the other previously recited elements; *response p. 20*

Line 3, it is unclear as to where the 'large objects' are coming from. *response p. 20*

Claim 22, line 3, it is unclear as to what is meant by 'upright-style vacuum cleaner housing'; Applicant should define the structural orientation of the housing; *response p. 14*

Lines 3-5, it is unclear as to the structural relationship of the elements to each other. *response p. 33*

Claims 23-41, line 2, 'A' should be replaced with 'The'. *Claims amended as such*

Claim 28, line 3, 'hinged' to what? *response p. 22*

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Claims 29 and 31-36, line 2, it is unclear as to where the 'hose' is located with respect to the other previously recited elements. *claim has been cancelled*

Claim 31, line 2, it is unclear as to what is meant by 'side by configuration'. *response p. 33*

Claim 32, line 2, it is unclear as to what is meant by 'siamese twin configuration'. *response p. 33*

Claim 33, line 2, it is unclear as to what is meant by 'hose of a concentric configuration'; *response p. 3*
why concentric?

Claim 37, line 2, it is unclear as to where the 'handle' is located with respect to the other previously recited elements. *response p. 23*

Claim 41, line 2, it is unclear as to where the 'trap' is located with respect to the other previously recited elements; *response p. 24*

Line 3, it is unclear as to where the 'large objects' are coming from. *response pg 24*

Claim 42, line 1, recites a vacuum cleaner however fails to provide any vacuum source; *pg. 34*

Claims 43-53, line 2, 'A' should be replaced with 'The'. *all claims amended*

Claim 44, line 2, is the 'collector' in addition to the 'container' of claim 42, line 4? *yes - response pg 35*

Line 2, where is it located with respect to the other previously recited elements?

Claim 45, line 2, is one intending to positively recite 'concentric tubing'? presently the claim simply recites fluid flow; *response p. 24*

Line 2, 'ingoing' and 'outgoing' from where? *response p. 24*

Line 2, it is unclear as to where the 'tubing' is located with respect to the other previously recited elements. *response pg 24*

Claim 46, line 2, 'flow' should be inserted after 'fluid'; *response p. 25*

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Line 2, is one intending to positively recite an 'impeller'? presently the claim simply recites fluid flow; *response p. 35*

Line 2, it is unclear as to where the 'impeller' is located with respect to the other previously recited elements. *response p. 25*

Claim 47, line 2, it is unclear as to what is meant by 'said is'; *response p. 25*

Line 2, is one intending to positively recite a 'centrifugal pump'? presently the claim simply recites fluid flow; *response p. 35*

Line 2, it is unclear as to where the 'pump' is located with respect to the other previously recited elements. *response p. 25*

Claim 48, line 2, it is unclear as to what is meant by 'said is'; *response p. 25*

Line 2, is one intending to positively recite a 'propeller'? presently the claim simply recites fluid flow; *response p. 35*

Line 2, it is unclear as to where the 'propeller' is located with respect to the other previously recited elements. *response p. 25*

Claim 49, line 2, is the 'collector' in addition to the 'container' of claim 42, line 4? *amended claim to remove term*

Line 2, where is it located with respect to the other previously recited elements?

Claims 50-52, line 2, is the 'collector' in addition to the container of claim 42, line 4? *amended claim to remove term*

Line 2, where is the 'collector' located with respect to the other previously recited elements?

Claim 53, line 2, it is unclear as to where the 'trap' is located with respect to the other previously recited elements; *response p. 26*

Line 3, it is unclear as to where the 'large objects' are coming from. *response p. 26*

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Double Patenting

14. Applicant is advised that should claims 2, 23 and 44 be found allowable, claims 3, 24 and 49, respectively, will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Is there a structural difference between the venting of claims 3 and 24 and that of claims 2 and 23?

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

For examination purposes, a ‘toroidal vortex nozzle’ was believed to be defined on page 15, lines 19-20 and page 16, lines 6-9, a concentric nozzle wherein clean air flows down the outside passages and dirty air is suctioned up the middle passage.

16. Claims 1, 8-11, 14-16, 20, 22, 27-28, 37 and 40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ehnert.

Ehnert discloses a canister-style vacuum cleaner housing (fig. 3, #66).

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Ehnert discloses a fluid delivery means (col. 4, lines 4-5).

Ehnert discloses a separation means (col. 4, line 5).

Ehnert discloses a toroidal vortex nozzle (fig. 4).

With respect to claims 8-10, Ehnert discloses a hose (fig. 3, #76).

With respect to claim 11, Ehnert discloses the hose having a side by side configuration (fig. 3, #76,78).

With respect to claim 14, Ehnert discloses a flexible hose (col. 4, lines 13-16).

With respect to claim 15, Ehnert discloses a removable hose (col. 4, lines 16-19).

With respect to claim 16, Ehnert discloses a handle (fig. 3, #70).

With respect to claim 20, Ehnert discloses at least one of the fluid delivery means and separation means disposed within the housing (col. 4, lines 4-6).

With respect to claim 22, Ehnert discloses an upright-style vacuum cleaner housing (fig. 1, #10).

With respect to claim 27, Ehnert discloses the nozzle having a wheel (fig. 1, #32).

With respect to claim 28, Ehnert discloses the nozzle being hinged (fig. 1, #46).

With respect to claim 37, Ehnert discloses a handle (fig. 1, #44).

With respect to claim 40, Ehnert discloses at least one of the fluid delivery means and separation means disposed within the housing (fig. 1, #60).

17. Claims 1, 8-11, 14-21, 42, 46, 48 and 53 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by McCord.

McCord discloses a canister-style vacuum cleaner housing (fig. 1, #20).

McCord discloses a fluid delivery means (fig. 3, #34).

McCord discloses a separation means (col. 2, lines 35-37).

McCord discloses a toroidal vortex nozzle (fig. 11).

With respect to claims 8-10, McCord discloses a hose (fig. 1, #24).

With respect to claim 11, McCord discloses a hose of a side by side configuration (fig. 11, #83,86).

With respect to claims 14-15, McCord discloses a removable, flexible hose (col. 3, #14-16).

With respect to claim 16, McCord discloses a handle (fig. 1, #26).

With respect to claims 17-18, McCord discloses a removable container coupled to the separation means (fig. 3, #50,52).

With respect to claim 19, McCord discloses the separation means being a centrifugal separator (col. 4, lines 37-39, col. 5, lines 54-56).

With respect to claim 20, McCord discloses at least one of the fluid delivery means and separation means disposed within the housing (fig. 3, #34).

With respect to claims 21 and 53, McCord discloses a coarse mesh trap (col. 4, lines 38-47).

With respect to claim 42, McCord discloses a toroidal vortex nozzle (fig. 11). McCord discloses a centrifugal separator (col. 4, lines 37-39, col. 5, lines 54-56). McCord discloses a container coupled to the separator (fig. 3, #50).

With respect to claims 46 and 48, McCord discloses the fluid flow generated by an impeller/propeller (fig. 3, #34).

18. Claims 22 and 38-39 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by DE661573.

DE661573 discloses an upright-style vacuum cleaner housing (fig. 1, d).

DE661573 discloses a fluid delivery means (fig. 1, b).

DE661573 discloses a separation means (fig. 1, c).

DE661573 discloses a toroidal vortex nozzle (fig. 1, k).

With respect to claims 38-39, DE661573 discloses a removable container coupled to the separation means (figs. 1-2, e).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

21. Claims 2-3 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert as applied to claims 1 and 22, respectively, above, and further in view of Self.

Ehnert discloses a similar vacuum cleaner however fails to disclose a vented nozzle.

Self discloses a tubular nozzle that discharges air with a vent (fig. 3, #51). It would have been obvious to one of ordinary skill in the art to provide the vent of Self in Ehnert to provide for a means to prevent pressure buildup within the nozzle if it happens to get blocked by debris.

22. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCord as applied to claim 1 above, and further in view of Self.

McCord discloses a similar vacuum cleaner however fails to disclose a vented nozzle.

Self discloses a tubular nozzle that discharges air with a vent (fig. 3, #51). It would have been obvious to one of ordinary skill in the art to provide the vent of Self in McCord to provide for a means to prevent pressure buildup within the nozzle if it happens to get blocked by debris.

23. Claims 4-5 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert as applied to claims 1 and 22, respectively, above, and further in view of Takemoto.

Ehnert discloses a similar vacuum cleaner however fails to disclose a rotating brush.

Takemoto discloses a vacuum cleaner with a nozzle having recirculating flow with a rotating brush therein (fig. 18, #16). It would have been obvious to one of ordinary skill in the art to provide the brush of Takemoto in Ehnert to allow for the most effective cleaning of a surface by allowing for agitation of the surface.

24. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCord as applied to claim 1 above, and further in view of Takemoto.

McCord discloses a similar vacuum cleaner however fails to disclose a rotating brush. Takemoto discloses a vacuum cleaner with a nozzle having recirculating flow with a rotating brush therein (fig. 18, #16). It would have been obvious to one of ordinary skill in the art to provide the brush of Takemoto in McCord to allow for the most effective cleaning of a surface by allowing for agitation of the surface.

25. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert. Ehnert discloses a similar vacuum cleaner however fails to disclose a wheel on the nozzle or a Siamese hose configuration.

Ehnert discloses the presence of a wheel on the nozzle when an upright-style canister is used because more mass needs to be displaced than that in a canister-style housing (col. 4, lines 22-26). It would have been obvious to one of ordinary skill in the art to include the wheel on the nozzle of the canister-style nozzle of Ehnert to ensure that the nozzle does not become 'stuck' to a surface.

With respect to claim 12, it would have been obvious to one of ordinary skill in the art to determine the most appropriate hose configuration in Ehnert to allow for the most effective fluid flow.

26. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert as applied to claim 1 above, and further in view of CA972510.

Ehnert discloses a similar vacuum cleaner however fails to disclose a hinged nozzle or concentric hose configuration.

CA972510 discloses a vacuum cleaner with a recirculating nozzle wherein the nozzle is hinged (page 6, lines 7-13). It would have been obvious to one of ordinary skill in the art to provide the hinged nozzle of CA972510 in Ehnert to allow for a change in working position.

With respect to claim 13, CA972510 discloses a concentric hose configuration (fig. 1, #4,6). It would have been obvious to one of ordinary skill in the art to provide the hose configuration of CA972510 in Ehnert to allow for a more compact hose design.

27. Claims 7, 13 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCord as applied to claim 1 above, and further in view of CA972510.

McCord discloses a similar vacuum cleaner however fails to disclose a hinged nozzle or concentric hose configuration.

CA972510 discloses a vacuum cleaner with a recirculating nozzle wherein the nozzle is hinged (page 6, lines 7-13). It would have been obvious to one of ordinary skill in the art to provide the hinged nozzle of CA972510 in McCord to allow for a change in working position.

With respect to claim 13, CA972510 discloses a concentric hose configuration (fig. 1, #4,6). It would have been obvious to one of ordinary skill in the art to provide the hose configuration of CA972510 in McCord to allow for a more compact hose design.

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28. Claims 12, 44, 47 and 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCord.

McCord discloses a similar vacuum cleaner however fails to disclose a Siamese hose configuration or collector.

With respect to claim 12, it would have been obvious to one of ordinary skill in the art to determine the most appropriate hose configuration in McCord to allow for the most effective fluid flow.

With respect to claims 43-44 and 49-50, due to the 112, second paragraph problem, it is not cleaner as to what is being claimed. From the figures it is believed that the container of claim 42 is the same as the collector of the later claims. If this is incorrect, the rejection will be corrected. McCord discloses a removable collector (fig. 3, #50,52).

With respect to claim 47, it would have been obvious to one of ordinary skill in the art to determine the most appropriate fluid flow generation device in McCord to ensure for recirculating flow.

With respect to claims 51-52, it would have been obvious to one of ordinary skill in the art to determine the most appropriate collector structure in McCord to allow for the most effective dirt disposal.

29. Claims 29-31 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert as applied to claim 22 above, and further in view of Inoue et al..

Ehnert discloses a similar vacuum cleaner however fails to disclose a hose.

Ehnert discloses conduits for connection between the nozzle and the housing (fig. 1, #56,58). Inoue et al. discloses a vacuum cleaner with an upright-style housing having a hose for connection between the nozzle and the housing (fig. 2, #28,30). It would have been obvious to one of ordinary skill in the art to provide the hose of Inoue et al. in Ehnert to allow for a flexible connection.

30. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert as applied to claim 22 above, and further in view of McCord.

Ehnert discloses a similar vacuum cleaner however fails to disclose a course mesh trap.

McCord discloses a recirculating vacuum cleaner with a course mesh trap (col. 4, lines 38-47). It would have been obvious to one of ordinary skill in the art to provide the mesh trap of McCord in Ehnert to ensure that all of the debris is captured and not returned to either the surface or the fluid delivery means.

Allowable Subject Matter

31. Claims 32-33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

32. The following is a statement of reasons for the indication of allowable subject matter: the prior art discloses an upright toroidal vortex vacuum cleaner with an upright-style housing, a fluid delivery means, separation means, toroidal vortex nozzle and a hose HOWEVER fails to disclose or fairly suggest the hose being of a Siamese twin or concentric configuration.

Conclusion

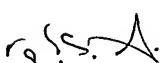
33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kerschner et al. discloses a concentric nozzle wherein the exhaust air flows on the outside and the incoming air flows up the middle. Foster and Coombs et al. disclose vortex pick nozzles. Palffy discloses a concentric nozzle. Squires, Servia, Nakai et al. and Farnsworth disclose recirculating vacuum cleaners.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T. Snider whose telephone number is (703) 305-0554. The examiner can normally be reached on Monday-Wednesday-Friday (6:30AM-3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on (703) 308-2920. The fax phone number for the organization where this application or proceeding is assigned is (703) 879-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Theresa T. Snider
Primary Examiner
Art Unit 1744



TTS

12/1/03



Notice of References Cited

Application/Control No.

10/050,501

Applicant(s)/Patent Under
Reexamination
ILLINGWORTH, LEWIS

Examiner

Theresa T. Snider

Art Unit

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B	US-1,664,092	03-1928	Squires	15/346
C	US-1,383,455	07-1921	Farnsworth	15/346
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F	US-4,243,178	01-1981	Self, Cecil H.	15/405
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O	661573	06-1938	DE	Buettner	15/346
P					
Q					
R					
S					
T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U		
V		
W		
X		

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.